MONITORING THE IMPACT OF ELECTRIC RESTRUCTURING ON LOW-INCOME CONSUMERS:

The What, How and Why of Data Collection

June 1999

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LIHEAP Advisory Committee on Managing for Results
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1 INTRODUCTION

The United States is undergoing the "restructuring" of the electric power industry today. Most proposals for electric restructuring involve proposals to allow for retail competition. While these proposals come under many names --direct choice, direct access, retail wheeling-- they all mean basically the same thing: consumers would no longer be obliged to purchase their power from the local electric utility company. Instead, just as in the telecommunications industry, consumers could shop from amongst all of the various companies offering electricity for sale and decide to buy from whomever they choose.

Will low-income consumers be "better off" or "worse off" as a result of restructuring the electric industry? The answer to that question will form the basis for a wide range of public policy decisions for years to come.

- Is there a need for special procedures to help low-income consumers remain connected to the electric grid?
- Is there a need for additional state or federal funding for low-income affordability assistance?
- Is there a need for special assistance to help low-income consumers effectively participate in the competitive market through aggregation?
- Is there a need for special low-income price protections?

Answering the question "will low-income consumers be better off or worse off" is clearly important to legislative and regulatory decisionmakers at both the federal and state levels as they craft competition statutes and orders, design programs, write regulations, and decide on future funding levels.

Much research predicts that low-income consumers will be *adversely* affected by electric restructuring. This analysis suggests that low-income consumers "will be excluded from the market or limited in their participation by means of exclusionary credit policies or limitations on the nature and the extent of the service available to them."[1] Moreover, this analysis warns, low-income consumers face the risk that "cost-shifting and lack of market power will result in small captive customer rates increasing."[2]

These predictions are often grounded in the experience of other competitive industries. One researcher in California concluded, for example, that competitive markets providing food, housing, health care, insurance and financial services present low-income consumers with

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[1] John Stutz, *et al.* (1996). ***Can We Get There from Here? The Challenge of Restructuring the Electric Industry so that We All Can Benefit***, at 3-43, Utility Consumers' Action Network: San Diego (CA).

[2] ***Stutz***, *supra*, at 3-43.

problems of unavailability, inconvenience, high prices, poor quality, and unaffordability.[3] The low-income electricity consumer can expect the same, this researcher noted, saying that "the same economic forces that produce a lack of choices, higher prices, and poor service in these markets will be at work in a restructured electric industry."[4]

2 THE PURPOSE OF THIS PAPER

Irrespective of what predictions analysts make, they remain, nonetheless, just predictions. This paper proposes a set of indicators through which to *measure* the impacts of electric restructuring on low-income consumers as restructuring unfolds. The purposes of the paper are four-fold:

1. To identify, define and explain a set of quantifiable indicators to use in tracking how restructuring the electric industry affects low-income consumers;

2. To propose a set of specific data through which these indicators can be measured (both currently and at periodic intervals into the future);

3. To suggest a methodology for collecting the proposed data; and

4. To explain the use to which the performance measures can be put.

The discussion below assumes basic familiarity by the reader with certain substantive issue areas, including electric restructuring, low-income energy needs, and fuel assistance.[5]

3 QUANTIFIABLE INDICATORS OF ELECTRIC RESTRUCTURING'S EFFECTS ON THE POOR

3.1 Low-Income Objectives in a Restructured Electric Industry

Low-income consumers seek, on a non-degraded basis, access to reasonably adequate service at prices reflecting least-cost. Note the three distinct components in this statement:

- **Access:** Low-income consumers seek "access" to service. Access involves the universal opportunity to connect to and take advantage of the competitive electric system.

- **Reasonably adequate service:** Low-income consumers seek "reasonably adequate service." This term encompasses a broad range of requirements involving the supply of kWh and the provision of supplemental customer services.

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[3] Carl Oshiro (1997). ***Universal Service in a Restructured Electric Industry: Can we ensure that all consumers have access to affordable electric service?***, at 11 - 12, Consumer Research Foundation: San Francisco (CA).

[4] ***Oshiro***, *supra*, at 12 (citations omitted).

[5] As a result, programs such as fuel funds, LIHEAP, weatherization, and the like are not explained in detail.

- **Least-cost service pricing:** Least-cost service pricing involves the dollars paid, not only on a per unit basis, but on a total bill basis as well. Pricing should reflect the least-cost provision of service consistent with the other two objectives.

These three components can help track the performance of a restructured electric industry relative to a baseline. The factors present an objective, quantifiable, empirically testable performance standard against which a restructured electric industry can be held.

The minimum acceptable level of performance would comply with a principle of no degradation. The principle of non-degradation counsels that, at a minimum, a move to a competitive electric industry should result in no degradation in the accessibility, adequacy or least-cost pricing of service to low-income consumers. This principle can be restated as three performance objectives:

- **Objective #1:** Electric restructuring should result in no degradation in the accessibility of service to low-income consumers;

- **Objective #2:** Electric restructuring should result in no degradation in the adequacy of service provided to low-income consumers;

- **Objective #3:** Electric restructuring should result in no degradation in the least-cost pricing of service to low-income consumers.

Meeting this minimum performance standard would require that, whatever the performance of the electric industry today, the performance as measured by the indicators described and defined below would not get worse.[6] If performance *does* deteriorate, it will be incumbent on state and/or federal policymakers to implement appropriate remedial action through legislation, regulation or funding.

3.2 General Considerations

Before beginning the substantive discussion of low-income performance indicators for a restructured electric industry, some grounds rules are in order. Several important characteristics go into successfully structuring *any* set of performance indicators. A set of performance indicators should be both limited in nature and subject to measurement.

Limited in nature: As with any performance-based measurement system, the set of indicators and the accompanying data collection proposed below cannot be comprehensive. They do not purport to be so. The criteria for the selection of both the recommended indicators and the data through which to track these indicators are guided by principles used to develop performance-based tracking of federal programs. The *Executive Guide: Effectively Implementing*

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[6] Some low-income advocates believe that it is already "too late" to establish an appropriate base case scenario. Many adverse impacts, such as the closure of neighborhood offices, have already occurred. Be that as it may, it does not appear possible to retroactively create a base case scenario. This observation simply emphasizes the importance of developing a base case data set sooner rather than later. At the least, it must be recognized that without backcasting to find out what was, the data that is now collected may not accurately reveal direction of movement, if the movement has already begun. The data could significantly understate the impacts.

the Government Performance and Results Act[7] presents a review of private organizations, as well as state and foreign government agencies, that were successful in measuring their performance. These successful organizations, the *Guide* says, had developed performance measures that were, amongst other things, limited to a vital few that were considered essential for producing data for decisionmaking. "These vital few measures should cover the key performance dimensions that will enable an organization to assess accomplishments, make decisions, realign processes, and assign accountability."[8]

In addition, the *Executive Guide* states, managers using a performance-based system "must balance their ideal performance measurement systems against real-world considerations, such as the cost and effort involved in gathering and analyzing data." Rather than being comprehensive, the data to be collected must be "sufficiently complete, accurate, and consistent to be useful in decisionmaking."[9] The proposals below adopt this test of "sufficient. . .to be useful."

Subject to measurement: Measuring performance does not always involve a determination of how many or how few; how big or how small; how quickly or how slowly. The *magnitude* of a performance impact may not be as important as the *direction* of an impact; the magnitude may not be as important as the fact that an impact exists at all. In particular, three types of performance indicators are utilized below.

- **Yes/no toggle:** The first measures whether something is either created or taken-away as a result of restructuring. One illustration of this indicator involves whether a winter shutoff protection exists. In this illustration, whether a utility now pursues winter shutoffs at all (when in the past it has not) is deemed to be more important than whether a company now performs 15,000 winter shutoffs a year rather than the 12,000 a year it has performed in the past.

- **Magnitude:** The second type of indicator measures the magnitude of a utility's actions. This measurement examines size (*e.g.*, how big, how much). For example, measuring whether there are more service disconnections in a restructured electric industry involves looking at the magnitude of a number. The size or amount is important.

- **Direction:** The third type of indicator measures direction. In this category, even if the exact magnitude cannot be determined, determining the direction of movement is what is important. For example, measuring whether collection practices are "stricter" or "more lenient" involves making an assessment of direction, even if the "quantity" of "strictness" cannot be determined.

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[7] Comptroller General of the United States, U.S. General Accounting Office, GAO/GGD-96-118 (June 1996).

[8] *Id.*, at 25.

[9] *Id.*, at 24.

It is important to realize, however, that measuring "direction" is not the same as measuring a trend. Virtually none of the indicators presented below will yield a significant performance impact evidenced by a single data point in any particular year. Instead, measuring the impacts at different times over a period of years will reveal a trend. Trend analysis can apply to any of the three types of measurements identified above.

3.3 The Proposed Indicators

An indicator is a description of the "thing" that is being measured in a performance-based evaluation. Each indicator will be supported by one or more pieces of data. The indicator answers the question "why." Why does the analyst want any particular piece of data?

3.3.1 Objective #1: No Degradation in Access to Service

From a low-income perspective, access to service involves the opportunity to obtain electric service reasonably free from the risk of involuntary service loss. Comparability, too, is part of this opportunity. A low-income consumer should have the opportunity both to take comparable levels of service and to experience comparable participation in the competitive market. Comparisons are made to the population as a whole.

Identification of the performance indicators: Four indicators are proposed for purposes of tracking the impacts of electric competition on low-income access to service.

Indicator #1: **Involuntary termination of service for nonpayment:** This indicator measures a failure in connection to the electric system, considered by many to be a key indicator of affordability. The indicator examines disconnection from the system; contract terminations are discussed in more detail below.

Indicator #2: **Service entering the winter heating season:** This indicator measures access at a time when consumers are particularly vulnerable. Many types of space heating systems, whether or not electric heating, depend on electricity for their operation.

Indicator #3: **Type of service provided:** This indicator measures whether consumers are being provided access to the same types of service. Offering restricted types of service such as prepayment meters and service limiter adapters is deemed to be unequal access to service.

Indicator #4: **Participation in the competitive market:** This indicator measures both the opportunity to participate in a retail choice electric industry and the actual exercise of retail choice. Providing the opportunity to choose does not necessarily lead to the actual exercise of choice. Moreover, for purposes here, non-participation is *defined* to include the cancellation of

contracts, even if the consumer does not go entirely without service as a result.[10]

Rationale for the performance indicators: The rationale for the four performance indicators proposed above lies with three low-income concerns. First, low-income service providers frequently express concern that a move to a competitive electric industry will have adverse impacts on universal service. The concerns include:

- That increases in the prices charged to small users generally, and to consumers using the provider of last resort specifically, will drive bills to unaffordable levels;
- That increased aggressiveness in the use of service terminations as a collection device will result in a decrease in universal service;
- That increased "strictness" in negotiating deferred payment arrangements for arrears will result in increased unaffordability and decreased universal service.
- An increased resistance by competitive service providers to continuing cold weather protections (sometimes known as winter shutoff moratoria).[11]

The second concern that low-income service providers express is that low-income customers will not, or will not be able to, freely participate in the competitive market, either individually or through aggregation. Recent reports from Rhode Island, for example, reveal that fewer than 1,900 of the state's 456,000 residential customers switched providers in the first 12 months of competition. In January, 1999, the largest competitor for small users in the nation -–Enron-- announced that it was abandoning its quest for residential customers because profit margins were too low.

Results in the natural gas industry are similar. While reports continue to be published about how "competition has come" to millions of Americans, a December 1998 report by the U.S. General Accounting Office (GAO) presents a somewhat different perspective. According to the GAO, as of July 1998, 34 gas utilities had natural gas retail access pilots with 15 million residential customers eligible to participate. Of those 15 million customers, however, only 553,000 (4%) had *actually* selected a gas marketer as a new supplier of gas.[12] The proposed performance indicators directly measure the competitive participation of low-income consumers.

Finally, concern has been expressed that low-income consumers will be moved into a lower tier of service by those companies providing service. This service will be marked by quasi-collection devices such as prepayment meters, as well as by lesser quality service such as service limiter adapters. At the same time, service innovations that may offer the potential to reduce bills, such

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[10] For example, the consumer could be defaulted to a provider of last resort.

[11] These shutoff protections are increasingly also being extended to severe *hot* weather.

[12] U.S. General Accounting Office (Dec. 1998). ***Energy Deregulation: Status of Natural Gas Customer Choice Programs***, GAO/RCED-99-30, U.S. General Printing Office: Washington D.C.

as time-of-day rates and load control devices, may be denied to low-income small users. The proposed performance indicators directly measure these service offerings and will allow a comparison of service offerings by income, socio-demographic characteristics, and location.

The specific data to be collected to allow a measurement of these indicators is described in detail below.

3.3.2 Objective #2: No Degradation in the Provision of Reasonably Adequate Service.

Reasonably adequate utility service involves the reliable provision of kWh to low-income consumers. . .and more. The traditional regulatory view frequently is that the service provided by an electric utility is simply the provision of energy through wires to the consumer. That approach, however, is too narrow. Reasonably adequate electric service includes a full range of supportive customer services in addition to merely the supply of kWh.\13\ For purposes here, these services include those that are used sufficiently frequently by low-income consumers to be of particular concern to the low-income community.\14\ Low-income-specific services such as crisis fuel funds, low-income energy efficiency programs, and rate discounts are examples. Services also include offerings such as shutoff protections during extreme (*e.g.*, hot, cold) weather as well as the provision of personal contact through customer service representatives.

Identification of the performance indicators: Six indicators are proposed for purposes of tracking the impacts of electric competition on the provision of reasonably adequate service. The indicators are limited to those services which are used sufficiently frequently by low-income consumers to be of special concern to low-income consumers:\15\

\13\ "A better approach is to consider an electric utility as the distributor of a `manufactured' product and adopt the manufacturing concepts of `product' and `service.' In the manufacturing world, a company's offering to its market is composed of both a physical product and a bundle of related or supporting services. A simple example would be the appliance manufacturer who offers free delivery, free installation and a 90-day warranty with the purchase of any appliance. The delivery, installation and warranty comprise the `service' component of this offering. Applying these concepts to an electric utility leads one to define the electric power (kWh) provided to consumers as the `product' component of the company's market offering. All other activities related to the provision of electric power or supporting the provision of electric power would be the `service' component." Stephen Colton (1996). ***A Model for Assessing the Interaction of Rate and Service Changes in a Mergers and Acquisitions Environment***, Accounting Insights: Plymouth (MN).

\14\ The initial inquiry involved an attempt to define services that were used exclusively or predominantly by low-income consumers. An electric utility, however, generally has no idea of the income of persons using their various service processes. The inquiry must therefore be: "what services are used sufficiently frequently by low-income consumers to be of particular importance to the low-income community?"

\15\ Traditional reliability quality of service measures are not included because they do not meet this test. While of as much concern to low-income consumers as they are to all consumers, they are not of *particular* or specialized concern to low-income consumers. *See generally*, Barbara Alexander (April 1996). "How to Construct a Service Quality Index in Performance-Based Ratemaking," ***The Electricity Journal*** 46, 48 - 49. Moreover, the indicators discussed in this paper should be distinguished from the indicators for measuring the performance of specific universal service programs. *See generally*, Roger Colton (June 1998). "Universal Service: A Performance-Based Measure for a Competitive Industry," ***Public Utilities Fortnightly***.

Indicator #5: **Crisis fuel funds:** This indicator measures the provision of crisis assistance funding as a means to prevent the disconnection of service due to nonpayment.

Indicator #6: **Low-income rate discount:** This indicator measures the provision of bill affordability assistance in the form of discount rates or bills.

Indicator #7: **Low-income energy efficiency:** This indicator measures the provision of bill affordability assistance in the form of energy efficiency investments.

Indicator #8: **Extreme weather shutoff protections:** This indicator measures the provision of shutoff protections at times during which consumers exhibit particular vulnerability to harms resulting from the loss of service.

Indicator #9: **Customer service contacts:** This indicator measures the provision of individual contact with a company in a manner reasonably designed to resolve payment and other customer service problems in a timely fashion.

Indicator #10: **Basic background data:** This indicator measures certain background information providing insights into the basic ongoing operation of retail choice within a state.

Rationale for the performance indicators: The most salient features of low-income "service" that can be directly measured involve the participation of service providers in explicit low-income protections. Four service offerings are measured in these performance indicators, including crisis funding through fuel funds; low-income rate or bill discounts; low-income energy efficiency; and extreme weather shutoff protections.

In addition, aside from basic affordability service issues, low-income service providers have expressed concern about access to basic *supportive* services such as company offices where personal contact can be made with customer service representatives, community offices where low-income customers without checking accounts can make cash payments, and adequate telephone customer service representatives to ensure prompt and appropriate responses to telephone service inquiries.

In considering quality of service, it is important to realize that low-income service concerns are not simply that electric restructuring may threaten the *existence* of supplemental customer services. It is rather that the quality of the service or the time required to obtain the service may degrade as well. Consider an illustration from Colorado as explanation. One service offered to residential consumers by Public Service Company of Colorado (PSCO) involves what are called "standard payment plans." Low-income advocates consider both the quality and timeliness of this service at risk as Colorado restructures its electric industry. Little question exists but that PSCO will still offer such plans, as well as that the terms of such plans will remain unchanged. Even today, however, low-income service providers report that plans are more difficult to obtain (*e.g.*, takes more effort, more personal resources). These reports indicate, as well, that plan timeliness

has also degraded because it simply takes longer to reach the company by telephone. Recent research in Colorado reported, for example, that:

- Ë Some customers who are entitled to a 60-day hold on service termination upon a utility being notified that the customer has applied for federal fuel assistance were being denied that "right" when fuel assistance staff could not make telephone contact with utility customer service representatives.

- Ë Some customers, who must obtain historical billing data from a utility as part of the fuel assistance application, could not complete their application because telephone calls to the utility result in busy signals or lengthy waits accompanied by recorded messages.

In addition, reports abound of the service quality problems facing local telecommunications companies as those companies slash customer service staff. One California consumer organization reports that "following this re-engineering, customer service disintegrated to the point where state regulators were inundated with thousands of customer complaints. Regulators in Colorado, Washington, Oregon, New Mexico, Arizona, Montana and Minnesota required that US West pay millions of dollars in fines, penalties, and reparations for poor service."\16\

Similar results are possible in the electric industry. According to the Energy Information Administration, from 1986 to 1995, "employment at major IOUs decreased by about 20 percent, a reduction of more than 100,000 employees. . .In an increasingly competitive industry, staff reductions and downsizing are likely to continue. Many utilities have announced plans to revamp their organizational structure, streamline their operations, and reduce staff."\17\

The specific data to be collected to allow a measurement of these indicators is described in detail below.

3.3.3 Objective #3: No Degradation in Least-Cost Pricing

The pricing of service depends on more than the price per kWh charged by an electric service provider. In addition to the price per kWh, least-cost service pricing implicates all of the various fees that might go into a consumer's total bill. These would include, for example, the supplemental customer service fees an electric service provider might charge.\18\

\16\ ***Oshiro***, *supra*, at 17.

\17\ U.S. Department of Energy, Energy Information Administration (Dec. 1996). ***The Changing Structure of the Electric Power Industry: An Update***, at 86, U.S. Department of Energy: Washington D.C.

\18\ Consider, for example, the banking industry. The Federal Reserve Board submits an annual report to Congress tracking the imposition of fees by competitive banks. The number of bank fees which the Federal Reserve specifically tracks is now up to 39. Board of Governors of the Federal Reserve System, ***Annual Report to the Congress on Retail Fees and Services of Depository Institutions***, at 2 (June 1998).

Least-cost service pricing is affected, as well, by the proportion of the total bill that a customer is capable of controlling. Accordingly, the proportion of the total bill that is collected through fixed charges that do not vary based on consumption (*e.g.*, a fixed customer charge, a fixed minimum bill) is an important aspect of service pricing.\19\ Two customers, both of whom have a monthly bill of $40, for example, do not stand in equal positions if one pays a fixed fee of $20 per month while the other pays a fixed fee of $5 per month.

Identification of the performance indicators: Three indicators are proposed for purposes of tracking the impacts of electric competition on least-cost service pricing.

Indicator #11: **Per Unit Prices:** This indicator measures the bill experienced by a consumer based solely upon the per unit price of electricity. Pricing is normalized for consumption levels.

Indicator #12: **Fixed monthly charge:** This indicator measures the extent to which consumers may reduce their home energy bill by reducing consumption.

Indicator #13: **Supplemental customer service fees:** This indicator measures the risk of consumers experiencing a total bill consisting of a per unit price supplemented by a variety of unbundled service fees.

Rationale for the performance indicators: Finally, the rationale for the indicators regarding a low-income consumer's service pricing are reasonably straightforward. The indicators measure bills based on uniform consumption amounts as a means to determine whether unit prices are increasing, decreasing, or remaining constant. In addition, the indicators recognize that the total bill is not simply the kWh charge, but includes a fixed monthly customer charge (or a minimum bill) as well as any fees for supplemental customer services.

The fixed monthly charge is important in that it represents an irreducible minimum. There is both an incentive and an opportunity for competitive industries to generate as high a proportion of their revenue as possible through charges that cannot be avoided through reduced consumption. Service provided to captive customers is particularly susceptible to this pricing scheme. To the extent that the proportion of total bill collected through fixed charges increases, the role of energy efficiency as a device to increase low-income bill affordability is reduced.

The specific data to be collected to allow a measurement of these indicators is described in detail below.

4 DATA COLLECTION

The data to be collected refers to the actual information quantifying the indicators described above. Identifying the data to be collected involves first specifying the precise information

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\19\ In this respect, "fixed monthly bills" refer to charges for current usage, not to some fixed minimum payment on arrears that are frequently included in deferred payment arrangements.

wanted. It then goes on to associate that information with a specified source. Data collection, in other words, involves answering the questions "what" *and* "where": what information is needed and where will it come from.

4.1 Objective #1: No Degradation in Access to Service

4.1.1 Data to be Collected Regarding Access to Service.

The data proposed to be collected in support of the four indicators of low-income access to service include:

Indicator #1: <u>Involuntary disconnection of service</u>: The data on involuntary disconnection of service measures magnitude. The sought-after data measures the extent to which, if at all, there is an increase in service terminations. Three pieces of data are recommended to support this inquiry:

1-1. How many times did individual households experience an involuntary termination of service within a 12 month period? This information could be "0" or more. The actual number is sought here since a household that experienced three service terminations is deemed to have less access to service than a household that has experienced one termination.

1-2. How long did individual households remain without power once service had been terminated? Previous research has found that households that have their service terminated for nonpayment tend to remain without power for less than one day. Collecting data on how long a consumer remains off the system allows a tracking of whether the average time off the system is increasing or not. A household that is off the system for a longer period of time is deemed to have less access to service.

1-3. In what month(s) did the service termination occur? The timing of service terminations allows an evaluation of whether consumers are losing their service immediately before, during, or immediately after the winter heating season, each of which carries a different implication as to access to service.

Indicator #2: <u>Service entering the winter heating season</u>: The data on winter heating service measures magnitude. The sought-after data measures the extent to which, if at all, there is an increase in the number of low-income consumers

entering the winter heating season without electric service. One piece of data is recommended to support this inquiry:

2-1. For individual households, was electric service connected or not connected at the start of the winter heating season of the immediate past year. Recognizing that, in actuality, what constitutes the "winter heating season" may vary based on location, for uniformity's sake, by definition, measurements are taken as of December 1st.

Indicator #3: **Type of service provided:** The data on the type of service provided to low-income consumers measures magnitude. The sought-after data measures the extent to which, if at all, there is an increase in the number of low-income consumers being provided limited types of electric service.[\20\] Rather than asking consumers whether they had limited service options, however, the data to be collected measures penetration rates for two specific types of limited service. To place constraints on the time period, data is limited to the immediate past 12 months. Two pieces of data are recommended to support this inquiry:

3-1. Whether individual households used a prepayment electric meter.

3-2. Whether individual households used a load limiter which turns off electricity to the home if the consumer is using too much power at any given point in time.

Indicator #4: **Participation in the competitive market:** The data on the participation of low-income consumers in the competitive market measures magnitude. The sought-after data measures three distinct attributes of "participation": (a) the *opportunity* to choose between retail suppliers of electricity; (b) the *actual exercise* of that choice; and (c) the exclusion from participation in the competitive market for whatever reason. To place constraints on the time period, data is limited to the immediate past 12 months. Four pieces of data are recommended to support this inquiry:

4-1. Whether individual households had the opportunity to select whether a company other than their local utility would sell them electricity (or, conversely, whether such households could buy electricity only from their local utility). The

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\20\ A secondary impact might involve measuring the extent to which, if at all, there is a disproportionate reliance on limited types of service for low-income consumers. For a discussion of the various means for testing discriminatory impacts, *see generally*, Roger Colton (1990). "Discrimination as a Sword: Use of an `Effects Test' in Utility Litigation." 37 ***Washington University Journal of Urban and Contemporary Law*** 97, *reprinted*, XIII ***Public Utilities Anthology*** 813.

opportunity to select measures the extent to which retail choice has been made available to residential customers.

4-2. Whether individual households actually switched their electric supplier to a company other than their local utility. This piece of information does not distinguish between consumers who remain with their local utility by default and those who remain by affirmative choice. It does measure, however, the extent to which consumers will actually use service providers other than their local utility.

4-3. Whether individual households actually switched the company selling them electric service, for whatever reason, or whether they remained with the same company. This piece of information differs from the information on whether consumers switched from their local utility. Rather than looking at actual participation in retail choice, this piece of information looks at customer churn rates. Switching suppliers may involve a decision to switch while remaining at the same residence. It may also mean switching because the consumer changed residences.

4-4. Whether individual households had their contract with their electric service provider canceled at any time for nonpayment. In a restructured industry, service terminations may occur only at the distribution level. The competitive supplier of electricity, however, may terminate its contract with the consumer. In that instance, the consumer is switched to a "provider of last resort" rather than losing his or her electric service altogether. In addition to tracking service shutoffs, therefore, service contract cancellations should be tracked.

4.1.2 Data Sources Regarding Access to Service.

The source of data for all four indicators of access to service should be an individual household survey. This survey can be performed at a statewide level or could be performed on a national basis. The problem with national surveys, however, is that they frequently are of insufficient size to allow an analysis of state-specific results. Even large national surveys currently undertaken, such as the U.S. Energy Information Administration's Residential Energy Consumption Survey (RECS), have insufficient sample sizes to develop valid information about low-income consumers at a geographic level narrower than Census regions.

Individual household surveys are desirable, also, because electric utilities --let alone competitive electric service providers-- do not generally collect information disaggregated by household income. Since utilities have no occasion to know which customers on their system are "low-

income," it is not possible to develop the information sought above. In collecting the above information through a household survey, household income would be one important additional piece of data. National surveys such as the American Housing Survey undertaken by the U.S. Department of Housing and Urban Development (HUD) provide good models to use in establishing basic demographic characteristics.[21]

Evident from the use of household survey data is the intent *not* to collect information on a company-specific basis. The intent is not to determine, for example, whether Company A is disconnecting more, fewer, or about the same number of consumers each year. The intent, instead, is to determine whether more consumers in a particular state are experiencing service terminations. The goal is to examine the impacts on consumers, not to associate those consumers with particular companies.

A mandate to perform a periodic survey of consumers should be made a part of electric restructuring legislation. Model legislative language is included in Appendix A. Funding such a survey should be provided as well.

4.2 Objective #2: No Degradation in the Provision of Reasonably Adequate Service

4.2.1 Data to be Collected Regarding Reasonably Adequate Service.

The data proposed to be collected in support of the six indicators of reasonably adequate service include:[22]

Indicator #5: **Crisis fuel funds:** The data on crisis fuel funds measures both magnitude and a yes/no toggle. The sought-after data first measures whether there exists either shareholder or customer contributions to a low-income fuel fund. This yes/no "toggle" is evident from an answer reporting that no fuel fund contributions are made. An increase in the number of instances where no shareholder or customer contributions are made indicates a degradation in service to low-income consumers. In addition, the data also measures the magnitude of both customer and shareholder contributions that are made. Decreasing levels of contributions also indicate a degradation in service.

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[21] HUD's American Housing Survey also provides a model if a state decides to track the *same* households over time.

[22] An entire set of service metrics was omitted from this discussion. These included responses to the following question: During the immediate past 12 months, what was the: (1) level of telephone busy signals; (2) percentage of estimated meter readings of total residential bills; (3) percentage of missed residential appointments; (4) percentage of residential customer problems resolved on first service call; (5) the lag time between receipt of mailed-in payment and posting of payment; (6) the percent of bills actually mailed on the listed bill mailing date; and (7) the lag time between payment of a bill at a drop box/grocery store/drug store and the date that payment is posted. These data are more appropriately collected and evaluated within the context of a performance-based quality-of-service index.

Crisis fuel funds involve dollars contributed by shareholders, or by customers (or both), and made available to income-eligible consumers facing the potential disconnection of service for nonpayment. Benefits are provided to pay the bill and thus avoid the shutoff. Two pieces of data are recommended to measure the impact of electric restructuring on the operation of fuel funds. To place constraints on the time period, data is limited to the immediate past 12 months:

5-1. The dollar contribution made by shareholders of electric service providers to a low-income fuel fund.

5-2. The dollar contribution made by customers of electric service providers to a low-income fuel fund.

Indicator #6: <u>Low-income discounts</u>: The data on rate or bill discounts available to assist low-income consumers measures both magnitude and a yes/no toggle. The sought-after data first measures whether a low-income rate or bill discount exists. The yes/no "toggle" is evident from an answer reporting that no discount exists. An increase in the number of instances where no discount program exists indicates a degradation in service to low-income consumers. A yes/no toggle will be used, also, to measure the criteria which form the basis of the availability of rate or bill discounts. To illustrate, it is not so important, for example, that there are 10,000 customers who are taking a rate discount limited to disabled elderly consumers. It is the fact, standing alone, that the discount is limited to disabled elderly consumers in the first instance which is important.

The data on rate or bill discounts also measures magnitude. It is not only *whether* a rate discount exists, but the *extent* to which low-income consumers participate in the discount, which is important. Two pieces of information are recommended to measure the impact of restructuring on the availability and operation of low-income rate discounts. To make reporting uniform, data should be requested as of a date certain.

6-1. As of December 31 of the immediate past year, the number of customers who were participating in a program (this number may be 0), the eligibility for participation in which is determined by income, where:

(1) Electric rates are set equal to a percentage of household income.

(2) Electric "customer charges" are waived.

(3) A discount is provided off of the total bill.

(4) A discount is provided on an initial block of consumption.

(5) A form of arrearage forgiveness or arrearage credit is provided.

(6) Some other discount or rate reduction is provided (with the type of discount specified).

6-2. As of December 31 of the immediate past year, the following criteria were used to establish eligibility for participation in a low-income rate discount program, if one exists:

(1) Customer must have an annual income below a specified level (with the income or poverty level actually used specified).

(2) Customer must be elderly.

(3) Customer must be disabled.

(4) Customer must have minimum level of arrears (with the level of arrears actually used specified).

(5) Some other criteria were used to establish eligibility (with the criteria actually used specified).

Indicator #7: <u>Low-income energy efficiency</u>: Like rate discounts, the data on energy efficiency programs available to assist low-income consumers first measures whether a low-income energy efficiency program exists. The yes/no "toggle" exists is evident from an answer reporting that no program exists. An increase in the number of instances where no program exists indicates a degradation in service to low-income consumers.

A yes/no toggle will be used, also, to measure the criteria which form the basis of the availability of a low-income energy efficiency program. It is not so important, for example, that there are 1,000 customers taking energy efficiency benefits limited to elderly homeowners. It is the fact, standing alone, that the energy efficiency program is limited to elderly homeowners in the first instance which is important.

The data on energy efficiency finally measures magnitude. It is not only *whether* an energy efficiency program exists, but the *extent* to which low-income consumers participate, which is important. Two pieces of information are recommended to support this inquiry. To place constraints on the time period, data is limited to the immediate past 12 months:

7-1 The magnitude of dollar expenditures made on energy efficiency programs targeted exclusively to low-income consumers,[\23\] which programs offer:

(1) Exclusively "energy education" services.

(2) Weatherization investments in electric space heating systems.

(3) Weatherization investments in space heating systems irrespective of fuel type.

(4) Energy efficiency investments in electric non-space-heating systems.

7-2. The following criteria were used to establish eligibility for participation in a low-income energy efficiency program, if one exists:

(1) Customer must have an annual income below a specified level (with the income or poverty level actually used specified).

(2) Customer must be a homeowner.

(3) Customer must have been a resident for a minimum of 12 months at his or her current address.

(4) Customer must use electric space heating.

(5) Some other criteria were used (with the criteria actually used specified).

Indicator #8: <u>Extreme weather shutoff protections</u>: The data on the existence of extreme weather shutoff protections measures a yes/no toggle. The sought-after data measures whether a company offers shutoff protections during

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\23\ This would include any component of a general residential program involving funds set aside or earmarked for low-income consumers.

extreme weather. The number of customers who actually take advantage of such protections is less important. Five pieces of information are recommended to support this inquiry.

8-1. Whether the company offers protections against shutoffs during times when temperatures are, or are projected to be, *below* a certain level.

8-2. Whether the company offers protections against shutoffs during times when temperatures are, or are projected to be, *above* a certain level.

8-3. Whether the company offers protections against shutoffs during certain months of the year irrespective of the temperature (specifying the months).

8-4. Whether, in those instances in which a company offers shutoff protections during cold weather, the company is required by state regulation or statute to do so.

8-5. Whether, in those instances in which a company offers shutoff protections during hot weather, the company is required by state regulation or statute to do so.

Indicator #9: **Customer service contact:** Data on the ability of low-income customers to make personal contact on customer service issues measures magnitude. The data measures the extent to which low-income customers have the opportunity to transact certain types of business through designated mechanisms. A decrease in the availability of these designated mechanisms is deemed to be a degradation in service. Four pieces of information are recommended to support this inquiry.

9-1. The number of company offices where a customer may walk-in to and, in person, engage in all of the following transactions: (1) make a cash payment; (2) negotiate a deferred payment arrangement for arrears; (3) arrange a reconnection of service at the same address (*e.g.*, after a disconnection); (4) make an application for service, along with determining and making payment of any required security deposit; and (5) make an account inquiry, including but not limited to submitting billing disputes and obtaining billing and payment histories.

9-2. Number of locations other than a company office (*e.g.*, a bank, drug store, grocery store) where a customer may make a cash payment toward a company bill.

9-3. Whether the company provides the following services:

(1) Allows customers to make bill payments to field staff who come to disconnect service.

(2) Allows customers to cash third party check at a company office and make cash payment from proceeds of check.

(3) Payment or budget counselling.

(4) Makes available special deferred payment arrangement terms for arrears, when the customer seeking to pay the arrears has an income below a specified level.

9-4. Fulltime equivalent staff positions per 1000 customers devoted exclusively to responding to customer-originated telephone calls relating to customer service or collection inquiries.

Indicator #10: **Basic background data:** Basic background data is necessary to allow any analysis of service levels to be placed into some context. This basic background information examines the extent to which retail choice is actually offering low-income customers competitive opportunities. Four pieces of information are recommended to support this inquiry.

10-1. The number of competitive service providers registered to serve residential customers as of December 31 of the immediate past year.

10-2. The number of competitive service providers actively serving residential customers as of December 31 of the immediate past year.

10-3. The number of residential customers who had switched from their incumbent electric utility as of December 31 of the immediate past year.

10-4. The dollars of low-income (or "universal service") funding generated by a state "wires charge" for the immediate past year.[24]

4.2.2 Data Sources Regarding Reasonably Adequate Service.

The source of data for all five indicators of reasonably adequate service (Indicators #5 - #9) will be the providers of competitive electric service in individual states. Annual data collection is recommended. An obligation to respond to such data collection should be incorporated into licensing or registration provisions for the state. In this fashion, participation in the data collection is simply one condition of doing business in the state. Standard data collection forms, including the definition of terms, can be prescribed by regulation.

Information collection such as that proposed here is not uncommon. In the energy industry, the Energy Information Administration of the U.S. Department of Energy (DOE/EIA) collects extensive information through prescribed, mandatory, uniform reporting requirements. The annual Form EIA-861 and the monthly Form EIA-326, for example, collect information on topics such as total sales by customer class (residential, commercial, industrial) (in mWh); total revenue by customer class (in dollars); and the total number of ultimate customers (*i.e.*, not including sales for resale). Similar information is collected from energy vendors including both fuel oil and LPG vendors. This data collection, in turn, is used to support periodic federal reports, such as the annual *State Energy and Price and Expenditure Report* and the *State Energy Data Report: Consumption Estimates*. A variety of annual utility-specific reports, also, are generated from these EIA forms including, for example, *Financial Statistics of Major Investor-Owned Utilities*, *Natural Gas Annual* and *Electric Power Annual*.

Data to support the "basic background information" (Indicator #10) should be reasonably available from state government agencies. The state treasurer (or state auditor) can be expected to track data on the amount of wires charge revenue generated for universal service support each year. The state licensing agency will be able to report the number of providers registered to serve residential customers. The state regulatory agency should be able to report the number of competitive service providers actively engaged in the provision of electricity to residential customers. Moreover, the state regulatory agency can be expected to track the number of residential customers actually switching providers by year (or by quarter). This basic background data should be made available to the institution compiling the low-income performance report.

Data should be collected and reported through the state community development office (defined as that agency responsible for disbursing the state's entitlement allocation of federal Community Development Block Grant --CDBG-- funds). Due to their nature, these offices are more likely than a state regulatory commission to have pre-existing data collection procedures. In addition, every state also has a State Data Center. In most instances, these Centers are operated under contract with a state university. These Centers fulfill functions ranging from collecting primary

[24] This would include a component of any general residential energy efficiency program that is set-aside (or earmarked) for low-income customers.

data on state-specified topics, to serving as the state contact on U.S. Census, U.S. Economic Census of Business, American Housing Survey, and similar data-intensive initiatives.

4.3 Objective #3: No Degradation in Least-Cost Service Pricing

4.3.1 Data to be Collected Regarding Least-Cost Service Pricing

The four indicators below address three aspects of service pricing: unit price; supplemental customer service fees; and the controllability of costs.

Indicator #11: **Per unit prices:** The price per kWh of electricity measures magnitude. It is not simply the direction of price movement for low-income residential prices, but it is the actual price level which is important. Determining the price level for electricity is made difficult by several factors. First, the per kWh price for distribution and generation service will likely be billed by different companies. No opportunity will exist for the provider of distribution service to know what the per kWh price of generation service is. Second, electric pricing is generally set on a blocked basis. The per kWh price at 0 to 500 kWh, in other words, is likely to be different than the per kWh price at 501 - 1000 kWh. Price data, therefore, must be normalized for consumption in order to be comparable. Finally, pricing often varies by season. With these limitations in mind, four pieces of data are recommended in furtherance of this inquiry.

11-1. As of January 1st of the immediate past year, the residential bill for 500 kWh of consumption.

11-2. On January 1st of the immediate past year, the residential bill for 1,000 kWh of consumption.

11-3. On July 1st of the immediate past year, the residential bill for 500 kWh of consumption.

11-4. On July 1st of the immediate past year, the residential bill for 1,000 kWh of consumption.

Indicator #12: **Fixed monthly charge:** The indicator involving fixed monthly charges measures magnitude. It is not simply whether a fixed monthly charge exists which is important, but it is the size of that fixed monthly charge. Some portion of a residential customer's total bill, whether it is for 500 kWh or 1000 kWh, will involve a fixed monthly charge. Sometimes these fixed charges are referred to as "customer charges," indicating that the charge is designed to collect fixed expenses associated with the mere hook-up of electricity (*e.g.*, the service drop, meter reading, billing). At other times, these fixed

expenses are collected through a minimum bill. The minimum bill is not in addition to consumption charges. Two pieces of data are recommended in furtherance of this inquiry.

12-1. On January 1st of the immediate past year, the fixed monthly residential customer charge (or fixed minimum monthly bill).

12-2. On July 1st of the immediate past year, the fixed monthly residential customer charge (or fixed minimum monthly bill).

Indicator #13: **Supplemental customer service fees:** Data on supplemental customer service fees measures magnitude. One additional way in which low-income consumers might face increased prices is through the "unbundling" of rates and services. Debundled service fees can represent a significant increase in "rates" to customers even if per kWh prices remain the same or decrease. A provider of electricity might debundle existing elements of service and institute new fees for those individual elements; Similarly, the provider might simply increase existing fees for certain elements of service other than those paid for through base rates. Data on supplemental customer service fees measures to what extent this actually occurs. Implicit within this "magnitude" question is a yes/no toggle. Implicit within an answer of $0 is the statement that "no such fee exists." Data on eleven specific fees is recommended in furtherance of this inquiry.

13-1. As of January 1st, the level of fee charged for the following (answer can be 0):

(1) Late fee (on monthly basis).[25]
(2) Check returned for insufficient funds.
(3) Reconnection (during office hours) after a disconnect for nonpayment.
(4) Reconnection (after office hours) after a disconnect for nonpayment.
(5) Field visit specifically for collection.
(6) Field visit other than for collection purposes.
(7) Issuance of a disconnect notice.
(8) Service turn-on.
(9) Provision of historical consumption or billing data.
(10) Voluntary suspension of service.

[25] Unlike other fee data, this may not be in dollars, but may instead be in terms of a percentage rate per month.

(11) Maximum residential security deposit.[26]

Indicator #14: **<u>Provider of last resort</u>:** Data on provider of last resort impacts measures magnitude. The sought-after data is the same pricing data as that previously identified, with the proviso that it is limited exclusively to the provider of last resort.

14-1. The total number of residential customers, by quarter, who were served by the state's "provider of last resort" during the immediate past year.

14-2. The number of residential customers served by the state's provider of last resort because they experienced the cancellation of their service contract due to nonpayment.

14-3. As of January 1st of the immediate past year, the residential bill for 500 kWh of consumption.

14-4. On January 1st of the immediate past year, the residential bill for 1,000 kWh of consumption.

14-5. On July 1st of the immediate past year, the residential bill for 500 kWh of consumption.

14-6. On July 1st of the immediate past year, the residential bill for 1,000 kWh of consumption.

14-7. As of January 1st, the level of fee charged for the following (answer can be 0):

(1) Late fee (on monthly basis) (in terms of percent per month).
(2) Check returned for insufficient funds.
(3) Reconnection (during office hours) after a disconnect for nonpayment.
(4) Reconnection (after office hours) after a disconnect for nonpayment.
(5) Field visit specifically for collection.
(6) Field visit other than for collection purposes.
(7) Issuance of a disconnect notice.
(8) Service turn-on.
(9) Provision of historical consumption or billing data.
(10) Voluntary suspension of service.

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[26] Unlike other fee data, this may not be in dollars, but may be in terms of some multiplier of a bill. A common maximum security deposit, for example, is twice the average monthly bill.

4.3.2 Data Sources Regarding Least-Cost Service Pricing.

The service pricing data identified above must include information from both generation and distribution companies. The combination of generation and distribution bills into a total residential bill will be a matter of data reporting. One source of data for all four indicators of least-cost service pricing will be providers of competitive electric service in individual states. As with the data on reasonably adequate service, annual data collection is recommended. As with the data on reasonably adequate service, also, an obligation to respond to such pricing data collection should be incorporated into licensing or registration provisions for the state. In this fashion, participation in the data collection is simply one condition of doing business in the state. Standard data collection forms, including the definition of terms, can be prescribed by regulation.

Finally, information from the provider of last resort should not be difficult to obtain. It is anticipated that the provider of last resort will remain a regulated service under conditions of retail choice. The collection of the data recommended above should be part of that continuing regulation.

5 THE USE OF THE PROPOSED PERFORMANCE MEASUREMENT

The collection of data on performance indicators is only important to the extent that such data is put to use in managing the process of restructuring. Again, GPRA provides guidance on how to approach the planning and utilization of performance data. As implementation of GPRA has made clear:

> Even the best performance information is of limited value if it is not used to identify performance gaps, set improvement goals, and improve results. . .[S]uccessful organizations recognize that it is not enough just to measure outcomes. . .By analyzing the gap between where they are and where they need to be to achieve desired outcomes, management can target those processes that are in most need of improvement, set realistic improvement goals, and select an appropriate process improvement technique.\27\

The generic model for using performance-based measurements to improve performance outcomes is discussed below.

5.1 The Generic "Control" Model

In seeking to measure outcomes and to evaluate performance, it is necessary to understand the generic "control" model. For purposes here, "control" is defined as a closed loop process\28\ that occurs through the repetition of three sequential steps:

\27\ Johnny C. Finch (Assistant Comptroller General) and Christopher Hoenig (Director, Information Resource Management/Policies and Issues). (June 20, 1995). ***Managing for Results: Critical Actions for Measuring Performance***, at 9, testimony before the U.S. House Subcommittee on Government Management, Information and Technology, Committee on Government Reform and Oversight.

\28\ A "closed loop" process uses the output of its previous iteration as one input.

1. Actual performance of the "thing to be controlled" is compared to a predetermined performance standard.

2. A material difference (variance) is analyzed and the root cause(s) determined.

3. Corrective action is initiated as necessary.

In addition to these three basic steps, several additional tasks are implicit in the overall process. The process is graphically set forth below in Figure 1. Figure 1 illustrates the seven Tasks in the process of using performance indicators to measure the impact of electric restructuring on low-income consumers. This paper: (1) performs Task #1 by identifying the "thing to be controlled"; (2) assists Tasks #3 and #4 by specifying data sources; and (3) addresses Task #4 by articulating the pre-determined performance standard (*i.e.*, no degradation).

Figure 1 illustrates, as well, why it is not possible to articulate ahead of time the manner in which performance measurement will be used to formulate and recommend remedial action in those instances where actual performance fails to meet the pre-determined performance standard. As Figure 1 illustrates, the appropriate remedial action depends on, amongst other things: (1) what indicator evidences a failure of performance; (2) what the root cause of that failure is; (3) what aspect of electric restructuring needs to be modified to correct the failure of performance; and (4) what specific remediation needs to occur. Designing appropriate policy and program responses to a failure in performance does not occur until several steps into the process.

6 RECOMMENDED NEXT STEPS

Six necessary steps exist in the process of developing performance measurement through which to assess the impacts of a restructured electric industry on low-income consumers:

1. **Develop uniform customer survey protocol:** Data is recommended to be collected at a state level. Nonetheless, substantial benefits would arise from the collection of uniform data amongst the states. In furtherance of this objective, one of the important first steps is to promulgate a uniform customer survey protocol that each state might use.

2. **Develop uniform company data collection protocols:** The same observation can be made about collecting information from competitive service providers, as well as from the provider of last resort. A second important first step is to promulgate a uniform data collection protocol that each state might use for electric service providers.

3. **Develop a uniform data reporting template:** It is possible to address the desire to have uniform reporting before-the-fact. This recommendation provides that pertinent interest groups such as the National Energy Assistance Directors Association (NEADA), National Association of Regulatory Utility Commissioners (NARUC), the National Conference of State Legislatures (NCSL), and the National Association of State Utility Consumer Advocates (NASUCA) develop

and distribute a series of uniform templates which states can use knowing that they represent a uniform reporting presentation. The promulgation of a uniform template for use in complying with recordkeeping and reporting requirements should include, but not be limited to a procedure-template to implement each performance indicator identified above.

The use of performance measures by the Pennsylvania Public Utilities Commission's Bureau of Consumer Services (BCS) provides an excellent model for the type of data reporting template that should be used. The annual BCS report *Customer Service Activity Report*, published for Pennsylvania's electric, natural gas and telecommunications utilities, illustrates the form and use of data collection reporting recommended herein.

4. **Pre-test the data collection protocols:** Before beginning full-scale implementation of the performance measurement process recommended above, and as part of the development of uniform collecting protocols and reporting templates, one immediate next step would involve pre-testing the data collection and reporting in a limited number of states. Three different circumstances warrant a pre-test: (1) states where residential retail electric competition has existed for a period of years (*e.g.*, California, Massachusetts, Pennsylvania, Maine); (2) states where residential retail electric competition has recently been authorized (*e.g.*, New Jersey, Maryland, Arkansas); and (3) states where residential retail electric competition has not yet been authorized (*e.g.*, Kentucky, Indiana, Colorado, Washington).

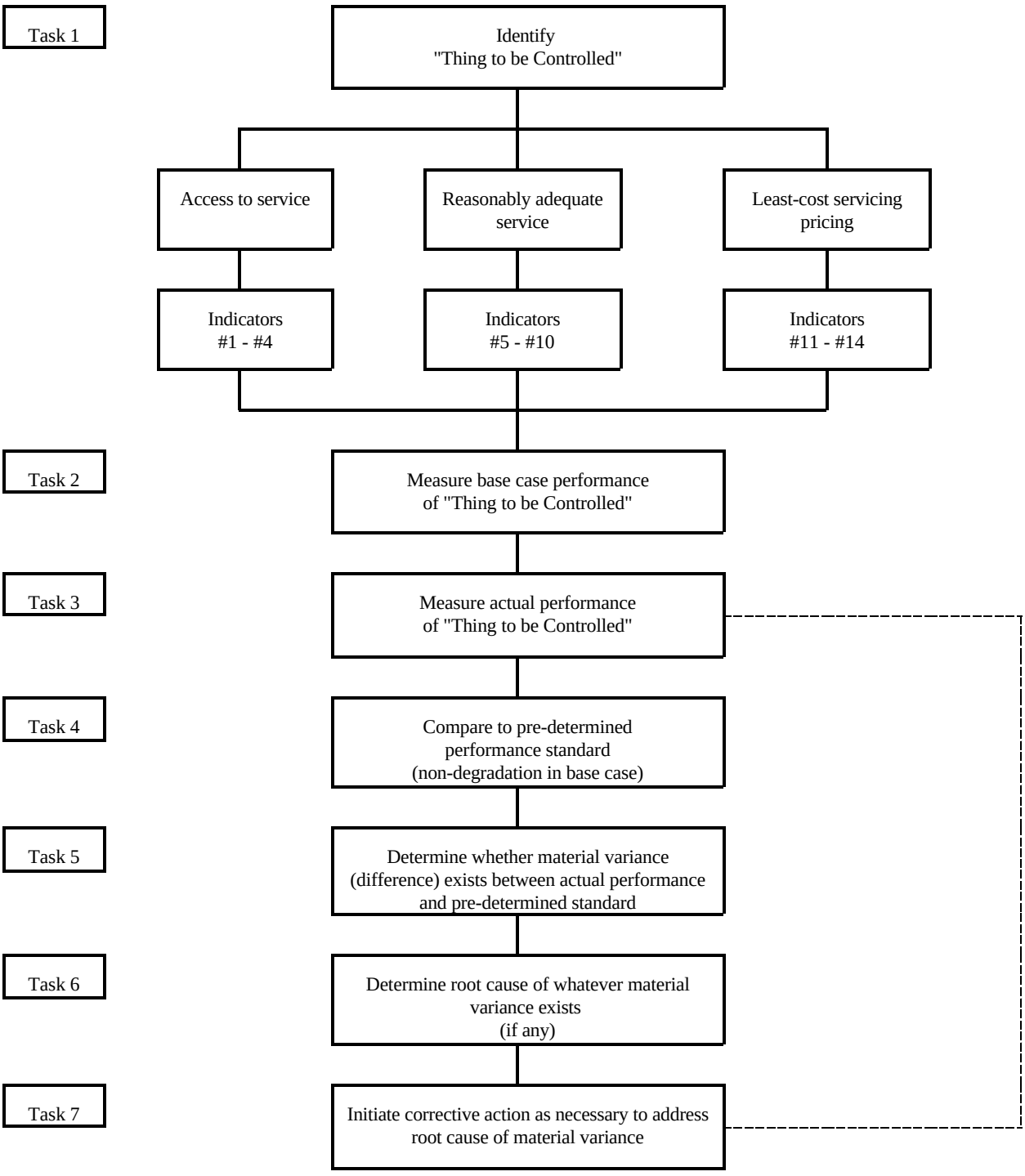

FIGURE 1: USE OF PERFORMANCE INDICATORS IN ASSESSING ELECTRIC RESTRUCTURING

APPENDIX A:

SUGGESTED RESTRUCTURING LEGISLATIVE LANGUAGE: MEASURING LOW-INCOME PERFORMANCE

1. *It is the policy of this state that the move to retail electric choice shall not result in any degradation in the access of low-income consumers to reasonably adequate service at prices reflecting least-cost.*

2. *The state community development agency shall, in consultation with the state utility commission and state office of consumer advocate, monitor on an on-going basis the state of competition, as it exists and as it is likely to evolve. Not later than January 1, _____ (insert date as appropriate) and annually thereafter, the community development agency shall collect information on quantifiable standards measuring the performance of a competitive retail electric industry as to access to service, adequacy of service, and least-cost service pricing to low-income consumers, and report its findings to the standing committee(s) of the General Assembly having cognizance of matters relating to energy.*

3. *The state community development agency shall, to the maximum extent practicable, cooperate with state agencies providing low-income fuel assistance or weatherization assistance to low-income consumers in developing appropriate performance measures.*

4. *The state community development agency may retain a consultant to assist in developing and implementing the performance report, provided the authorization to retain such consultant shall expire December 31, _____. The reasonable and proper expenses for retaining the consultant and implementing the performance report program shall be reimbursed through the state public utility commission.*

Monitoring the Impact of Electric Restructuring on Low-Income Consumers:

The What, How and Why of Data Collection

Objective #1: To prevent degradation in the accessibility of electric service to low-income consumers.

Indicator #1: Involuntary disconnection of service for nonpayment.

- **Data #1-1:** Number of involuntary service terminations per individual household for low-income and non-low-income consumers, by low-income status.
  - Data source: customer survey.
- **Data #1-2:** Average length of time, in days, a customer remained off the utility system subsequent to an involuntary service termination, by low-income status..
  - Data source: customer survey
- **Data #1-3:** Number of terminations by month, by low-income status..
  - Data source: customer survey

Indicator #2: Service entering the winter heating season.

- **Data #2-1:** Number of customers without electric service as of December 1st, by low-income status.
  - Data source: customer survey.

Indicator #3: Type of service provided

- **Data #3-1:** Number of customers using prepayment meters, by low-income status.
  - Data source: customer survey.
- **Data #3-2:** Number of customers using service limiters, by low-income status.
  - Data source: customer survey.

Indicator #4:	Participation in the competitive market.
Data #4-1:	Number of customers who had the opportunity to select whether a company other than their local utility would sell them electricity (or, conversely, whether such households could buy electricity only from their local utility), by low-income status.
	Data source: customer survey.
Data #4-2:	Number of customers who actually switched their electric supplier to a company other than their local utility, by low-income status.
	Data source: customer survey.
Data #4-3:	Number of customers who actually switched the company selling them electric service, for whatever reason, by low-income status.
	Data source: customer survey.
Data #4-4:	Number of customers who had their contract with their electric service provider canceled at any time for nonpayment, by low-income status.
	Data source: customer survey.

Objective #2: To prevent degradation in the adequacy of service provided to low-income consumers.

Indicator #5:	Crisis fuel funds.
Data #5-1:	Amount of dollar contribution made by shareholders of electric service providers to a low-income fuel fund.
	Data source: Uniform data collection protocol to competitive service providers.
Data #5-2:	Amount of dollar contribution made by customers of electric service providers to a low-income fuel fund.
	Data source: Uniform data collection protocol to competitive service providers.

Indicator #6:	Low-income rate discounts	
	Data #6-1:	The number of customers who were participating in selected types of low-income rate discount programs.
		Data source: Uniform data collection protocol to competitive service providers.
	Data #6-2:	Number of companies using selected factors as eligibility criteria for low-income rate discount programs.
		Data source: Uniform data collection protocol to competitive service providers.

Indicator #7:	Low-income energy efficiency	
	Data #7-1:	Amount of dollar expenditures made on selected types of energy efficiency programs targeted exclusively to low-income consumers.
		Data source: Uniform data collection protocol to competitive service providers.
	Data #7-2:	Number of companies using selected factors as eligibility criteria for participation in low-income energy efficiency programs.
		Data source: Uniform data collection protocol to competitive service providers.

Indicator #8:	Extreme weather shutoff protections.	
	Data #8-1:	The number of companies offering protections against shutoffs during times when temperatures are, or are projected to be, *below* a certain level.
		Data source: Uniform data collection protocol to competitive service providers.
	Data #8-2:	The number of companies offering protections against shutoffs during times when temperatures are, or are projected to be, *above* a certain level.
		Data source: Uniform data collection protocol to competitive service providers.

Data #8-3:	The number of companies offering protections against shutoffs during certain months of the year irrespective of the temperature (specifying the months).
	Data source: Uniform data collection protocol to competitive service providers.
Data #8-4:	The number of instances where when a company offers shutoff protections during cold weather, the company is required by state regulation or statute to do so.
	Data source: Uniform data collection protocol to competitive service providers.
Data #8-5:	The number of instances where when a company offers shutoff protections during hot weather, the company is required by state regulation or statute to do so.
	Data source: Uniform data collection protocol to competitive service providers.

Indicator #9:	Customer service contact.
Data #9-1:	The number of company offices where a customer may walk-in to, in person, engage in all of a set of designated transactions defined to be of particular concern to low-income consumers.
	Data source: Uniform data collection protocol to competitive service providers.
Data #9-2:	The number of locations other than a company office (*e.g.*, a bank, drug store, grocery store) where a customer may make a cash payment toward a company bill.
	Data source: Uniform data collection protocol to competitive service providers.
Data #9-3:	The number of companies providing selected services defined to be of particular importance to low-income consumers.
	Data source: Uniform data collection protocol to competitive service providers.

Data #9-4:	The number of fulltime equivalent staff positions per 1000 customers devoted exclusively to responding to customer-originated customer service telephone inquiries.
	Data source: Uniform data collection protocol to competitive service providers.

Indicator #10:	Basic background data.
Data #10-1:	The number of competitive service providers registered to serve residential customers.
	Data source: State licensing agency.
Data #10-2:	The number of competitive service providers actively serving residential customers.
	Data source: State utility regulatory commission.
Data #10-3:	The number of residential customers who had switched from their incumbent electric utility.
	Data source: State utility regulatory commission.
Data #10-4:	Amount of dollars in low-income (or "universal service") funding generated by a state "wires charge."
	Data source: State treasurer or state auditor.

Objective #3: To prevent degradation in the least-cost pricing of service to low-income consumers.

Indicator #11:	Per unit prices
Data #11-1:	Average January 1st residential bill for 500 kWh of consumption.
	Data source: Data source: Uniform data collection protocol to competitive service providers.
Data #11-2:	Average January 1st residential bill for 1000 kWh of consumption.
	Data source: Uniform data collection protocol to competitive service providers.
Data #11-3:	Average July 1st residential bill for 500 kWh of consumption.
	Data source: Uniform data collection protocol to competitive service providers.

Data #11-4:	Average July 1st residential bill for 1000 kWh of consumption.
	Data source: Uniform data collection protocol to competitive service providers.

Indicator #12:	Fixed monthly charge.
Data #12-1:	Average January 1st fixed monthly residential customer charge (or fixed minimum monthly bill).
	Data source: Uniform data collection protocol to competitive service providers.
Data #12-2:	Average July 1st fixed monthly residential customer charge (or fixed minimum monthly bill).
	Data source: Uniform data collection protocol to competitive service providers.

Indicator #13:	Supplemental customer service fees.
Data #13-1:	The January 1st level of fees for selected services defined to be of particular importance to low-income consumers.
	Data source: Uniform data collection protocol to competitive service providers.

Indicator #14:	Provider of last resort.
Data #14-1:	Total number of residential customers, by quarter, who were served by the state's "provider of last resort" during the immediate past year.
	Data source: State utility regulatory commission.
Data #14-2:	The number of residential customers served by the state's provider of last resort because they experienced the cancellation of their service contract due to nonpayment.
	Data source: State utility regulatory commission.
Data #14-3:	The average January 1st residential provider of last resort bill for 500 kWh of consumption.
	Data source: State utility regulatory commission.

Data #14-4:	The average January 1st residential provider of last resort bill for 1000 kWh of consumption.
	Data source: State utility regulatory commission.
Data #14-5:	The average July 1st residential provider of last resort bill for 500 kWh of consumption.
	Data source: State utility regulatory commission.
Data #14-6:	The average July 1st residential provider of last resort bill for 1000 kWh of consumption.
	Data source: State utility regulatory commission.
Data #14-7:	The January 1st level of provider of last resort fees for the selected services defined to be of particular importance to low-income consumers.
	Data source: State utility regulatory commission.